

Revision of the Australian sawfly genus *Antargidium* (Hymenoptera, Symphyta, Argidae) with description of two new species

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Abstract

Antargidium Morice, 1919 is a small sawfly genus with six described species. The distribution is limited to Australia, with four species occurring in eastern and two in the south-eastern part of Western Australia. Two species, *A. flavescens* **n. sp.** and *A. nigrum* **n. sp.**, are described as new from Western Australia. *Antargidium rufum* Benson **syn. nov.** is treated as a synonym of *A. dentivalve* Benson. Host plants are known for five species and include plants of the families Sapindaceae and Leguminosae.

Key words: sawfly, taxonomy, key to species, new species

Introduction

The sawfly genus *Antargidium* (Hymenoptera: Argidae) was erected by Morice (1919) for *Hylotoma apicale* Kirby, 1894. Kirby (1894) already noticed the small size of the species compared to other members of *Hylotoma* (= *Arge*). In addition to the small size, the interstitial position of the “recurrent and the cubital nerves” of the hind wing (i.e., 2r-m and m-cu) was given as a diagnostic character to separate *Antargidium* from other representatives of the subfamily Arginae Morice (1919). However, Benson (1934) showed that the hind wing venation in *Antargidium* is variable, and that in the type specimens of *A. apicale* the position of 2r-m and m-cu is not interstitial. According to Benson (1934), it appears that Morice did not look at the type specimens of *A. apicale*, but had specimens at hand that were identified by Rohwer as belonging to this species.

In Australia, *Antargidium* is the only representative of the cosmopolitan Arginae (Naumann 1991). *Antargidium* can be separated from other genera using the key in Benson (1963). Benson (1934) re-defined the generic limits of *Antargidium*, added two new species, and described two more new species shortly after (Benson 1935), all of them originating from eastern Australia. The most recently collected specimens mentioned in Benson’s articles were caught in 1930, and it appears that for 40 years until 1970 no specimens of the genus had been collected. A single female collected in 1970, and several specimens reared from larvae that were collected in 1971, are all from south-western Australia and represent two distinct species that are described here as new.

Material and methods

Acronyms refer to the following depositories:

ANIC	Australian National Insect Collection, Canberra, Australia;
BMNH	The Natural History Museum, London, United Kingdom;
NHMW	Naturhistorisches Museum, Vienna, Austria;
QMB	Queensland Museum, Brisbane, Australia;
QDPI	Queensland Department of Primary Industries;
MVMA	Museum of Victoria, Melbourne, Australia;

USNM National Museum of Natural History, Smithsonian Institution, Washington, DC, USA;
WAM Western Australian Museum, Perth, Australia;
ZSM Zoologische Staatssammlung, Munich, Germany.

Other abbreviations used are: OOL = distance between compound eye and lateral ocellus; POL = distance between lateral ocelli. The postocellar area was measured as the maximum distance between lateral ocelli and the distance from the hind margin of a lateral ocellus to the hind margin of the head in dorsal view. The supraclypeal area is defined as the median area of the lower face between the toruli and the dorsal limit of the clypeus. It is usually strongly bulging in *Antargidium*. The dorsal limit of the clypeus lacks a distinct groove but can be distinguished from the supraclypeal area by a difference in sculpture.

The microphotographs were obtained using a digital camera (ProgRes SpeedXT core 5, Jenoptik AG) attached to a Leica DM 5000B compound microscope (images of slide preparations) and a Nikon D300s DSLR with a Leitz Photar 1:2/25 mm lens connected via a Novoflex Universal Bellows (images of pinned specimens). Images were captured in raw format, developed using Adobe Lightroom 3, and extended depth-of-field images obtained using Zerene Stacker 1.04 (Zerene Systems LLC). Stacked images were enhanced using Adobe Photoshop CS5 (Adobe Systems Inc.). Terminology generally follows Huber & Sharkey (1993).

Key to the species

- | | | |
|---|--|----------------------|
| 1 | Head and thorax black, abdomen predominantly dark brown to black (Fig. 12) | <i>A. nigrum</i> |
| - | At least pronotum and abdomen largely orange or reddish-brown (Figs 8–11) | 2 |
| 2 | Supraclypeal area without longitudinal median carina, smooth and shining with very scattered punctuation (Fig. 1, S). Forewing hyaline with apical half at least slightly infusate. Hypopygium of female deeply excised posteromedially (Fig. 6) | <i>A. allucente</i> |
| - | Supraclypeal area at least in upper half with median carina, distinctly punctured (cf. Fig. 2). Forewing infusate throughout. Hypopygium of female entire behind | 3 |
| 3 | Head black. Longitudinal carina on supraclypeal area reaching clypeus (Fig. 2, K) | <i>A. atriceps</i> |
| - | Head at least partly yellow-brown or brown. Longitudinal carina on supraclypeal area not reaching clypeus | 4 |
| 4 | Postocellar area about $0.6 \times$ as long as broad (Fig. 3). Antenna yellow except proximal third infusate (Fig. 11). Sawsheath without dorsal projections (Fig. 7) | <i>A. flavescens</i> |
| - | Postocellar area $0.3\text{--}0.4 \times$ as long as broad (Fig. 4). Antenna predominantly black (Figs 9, 10). Sawsheath with dorsal projections (Fig. 13, P) | 5 |
| 5 | Abdomen all yellow (Fig. 10). Sawsheath pointed at apex, directed upward (Fig. 5) | <i>A. dentivalve</i> |
| - | Abdomen black at apex (Fig. 11). Sawsheath bluntly rounded at apex, not directed upward (Fig. 13) | <i>A. apicale</i> |

Antargidium Morice

Antargidium Morice, 1919: 254 (key). Type species: *Hylotoma apicale* W.F. Kirby, 1894, by monotypy.

Antargidium: Forsius 1927: 19 (key to genera); Benson 1934: 228–230 (diagnosis, illustration, distribution); Malaise 1941: 131 (key to genera); Benson 1963: 632–634 (classification, distribution, key to genera); Taeger *et al.* 2010: 121 (catalogue).

Diagnosis. Small, body size less than 7 mm. Body smooth and shining. Antenna short, in female at most slightly longer than width of head, in male about $1.3\text{--}1.5 \times$ as long as width of head; pedicel short, almost transverse. Malar space narrow, about half as long as maximum width of pedicel. Head with transorbital carina (Benson 1963, fig. 4), in dorsal view parallel or slightly narrowing behind eyes. Clypeus with front margin excised. Compound eyes slightly converging below. Tibiae with two apical spurs, middle and hind tibiae with one subapical spur. Females of species occurring in eastern Australia have the sawsheath equipped with a dorsal process. In species from Western Australia the sawsheath is simple without dorsal process.

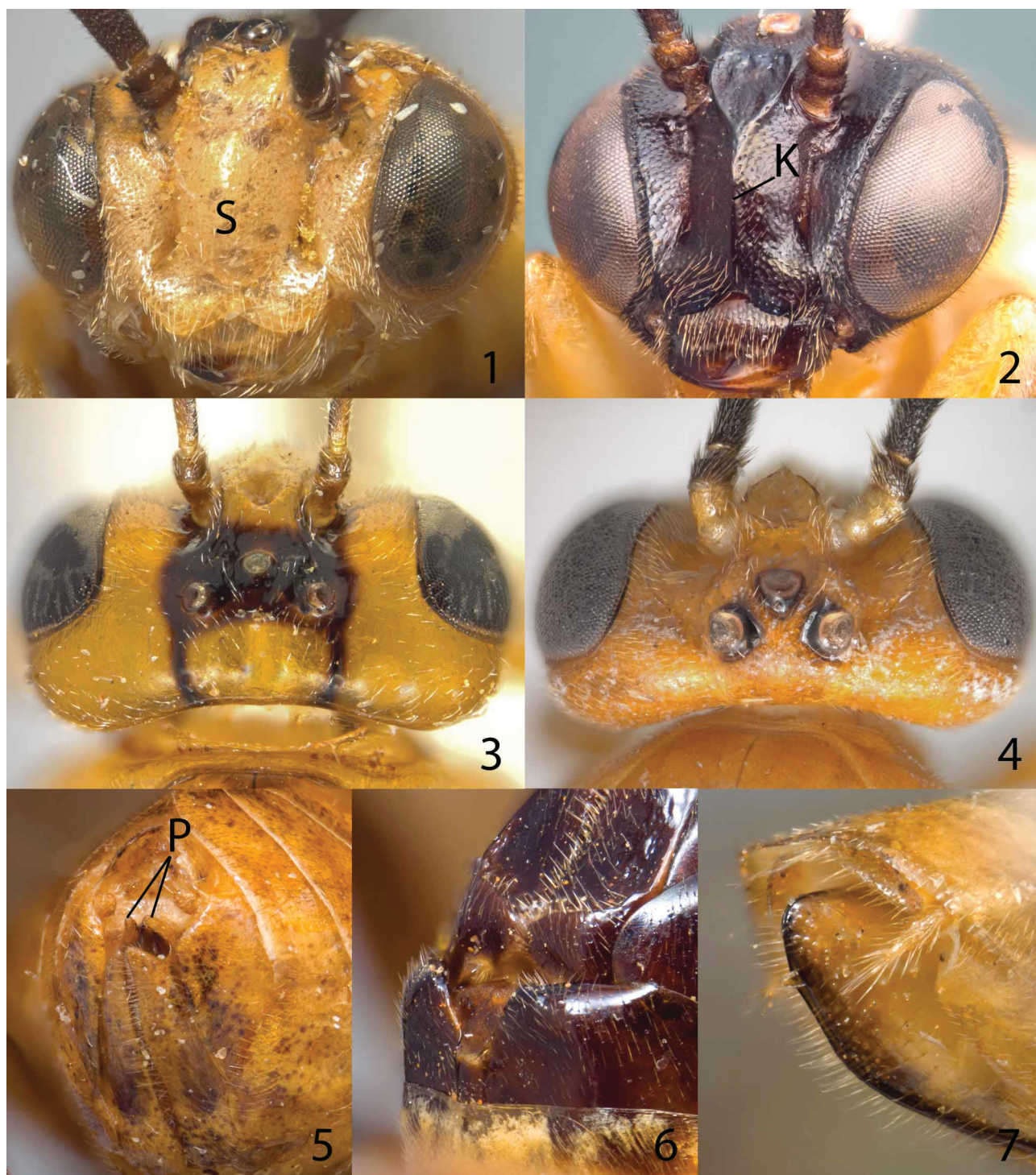
Distribution. Australia: New South Wales, Queensland, Western Australia.

***Antargidium allucente* Benson**

(Figs 1, 6, 8, 14, 15)

Antargidium allucente Benson, 1934: 230–231.

Antargidium allucente: Quinlan 1974: 227 (type information), Taeger *et al.* 2010: 121 (catalogue).

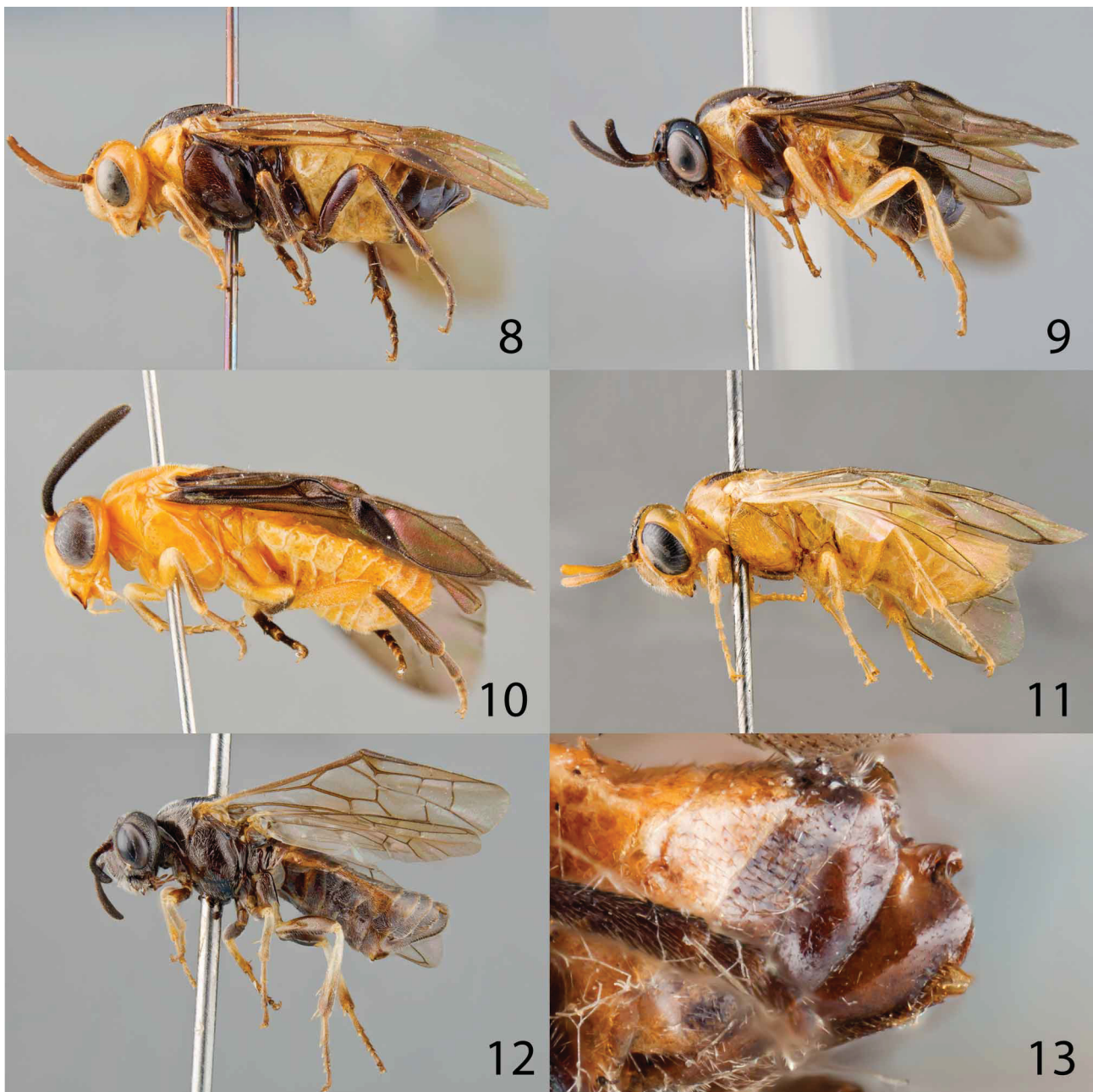


FIGURES 1–7. *Antargidium* spp., 1–2 face, 3–4: vertex, 5: apex of abdomen, 6: female hypopygium, 6: sawsheath. (1, 6) *A. allucente*; (2) *A. atriceps*; (3, 7) *A. flavescens* holotype; (4, 5) *A. dentivalve*. Abbreviations: S: supraclypeal area, K: carina, P: dorsal projections.

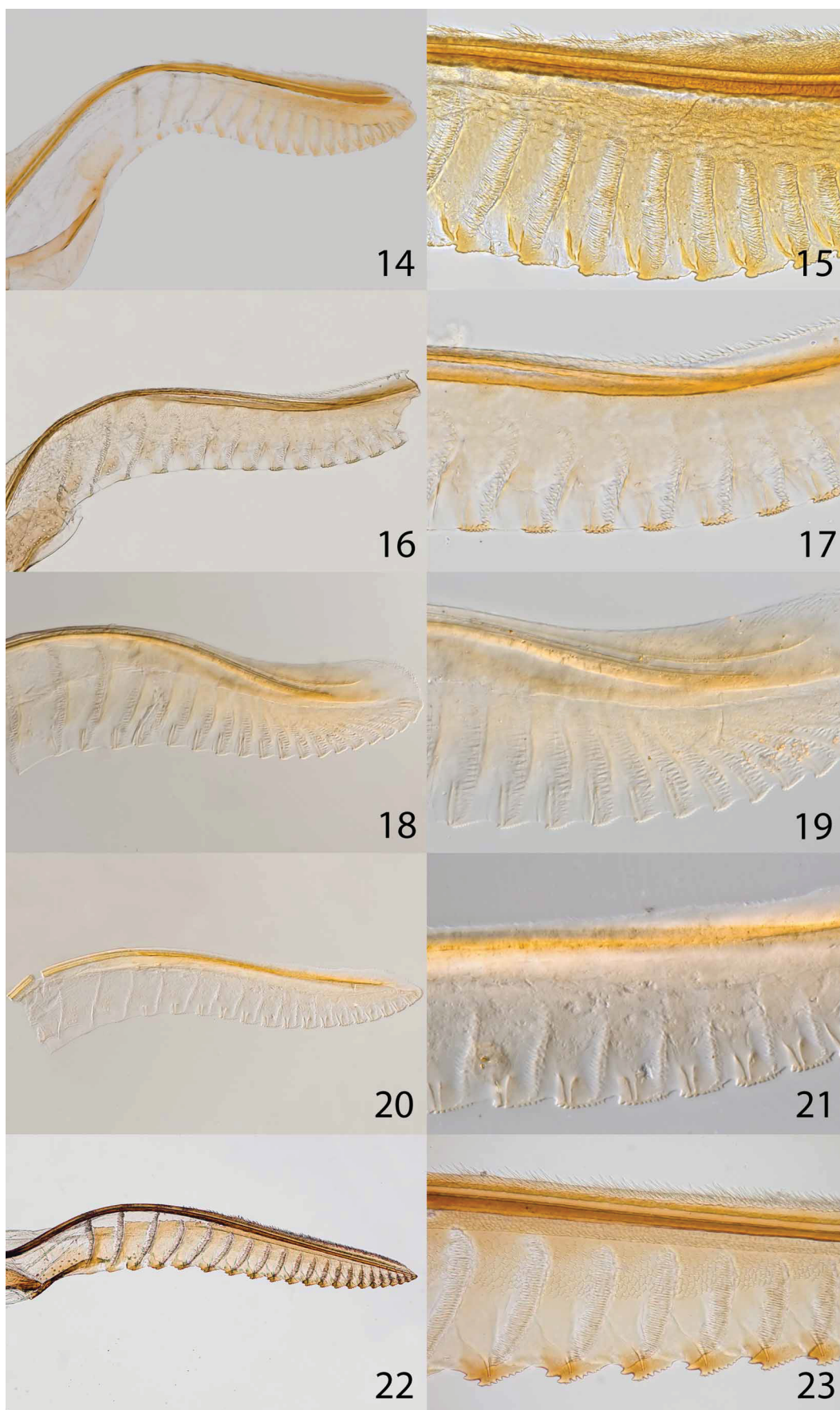
Description. Female. Length 5–6 mm. Antenna dark brown to black. Head orange, lower face yellow-white, ocellar triangle and area above antennal sockets sometimes with brown spot; apex of mandible reddish-brown. Thorax black with pronotum and tegula yellow. Legs black except forefemur at apex, tibiae and tarsi yellow-brown. Abdomen yellow-brown, first tergite at base and apex of abdomen starting with tergite 5 or 6 black. Wings hyaline with apical half slightly infusate; veins and stigma black.

Supraclypeal area glabrous with very scattered punctation, without median longitudinal carina. Antenna shorter than width of head (0.8); pedicel transverse, $0.4 \times$ as long as broad. POL slightly shorter than OOL (0.8); postocellar area about $1.5 \times$ as broad as long. Eyes about $1.4 \times$ as long as broad, converging below, interocular distance $1.2 \times$ eye height. Sawsheath short, apically with scopae projecting posteriorly and inwards, in lateral view rounded (Benson 1934, figs 4a, b). Lancet short and triangular, with 10 serrulae, basal 3 serrulae rounded, apical 7 serrulae serrate, with distinct, sclerotized, rounded projections of annuli above serrulae 5–9.

Male. Length 6.5 mm. Similar to female except the following parts sometimes orange-yellow: mesepisternum, mesepimeron, mesosternum, hypopygium, genitalia, and legs except outer middle and hind tibiae brownish.



FIGURES 8–13. *Antargidium* spp., 8–12: females in lateral view, 13: apex of abdomen and sawsheath in lateral view. (8) *A. allucente*; (9) *A. atriceps*; (10) *A. dentivalve*; (11) *A. flavescens* holotype; (12) *A. nigrum* holotype; (13) *A. apicale*.



FIGURES 14–23. *Antargidium* spp., 14, 16, 18, 20, 22: female lancet, 15, 17, 19, 21, 23: middle section of lamnium. (14, 15) *A. allucente*; (16, 17) *A. apicale*; (18, 19) *A. atriceps* holotype; (20, 21) *A. dentivalve* holotype; (22, 23) *A. nigrum*.

Host. *Alectryon oleifolius* (Desf.) S.T.Reynolds (Sapindaceae).

Distribution. Australia: New South Wales, Queensland.

Types. Holotype: Female, labelled “Type” [round label with red margin], “Meteor Downs nr. Springsure Q, 18 Nov. – 3 Dec. 1930. I. M. Mackerras”, “HOLOTYPE *Antargidium allucente* sp. nov., det. R. B. Benson 1934”, “Holotype” [red label], (ANIC, examined). Paratype: Female, labelled “Paratype” [round label with yellow margin], “Meteor Downs nr. Springsure, Q. 8 Nov. – 3 Dec. 1930. I. M. Mackerras”, “PARATYPE *Antargidium allucente* sp. nov. det R.B. Benson 1934” (BMNH).

Additional specimens examined. NEW SOUTH WALES. Mullaley (–31.10°, 149.91°), Jan 1957, F. E. Wilson (1 ♂, 1 ♀, MVMA); Bogan road (–32.9°, 148.1°), taken on *Geijera parviflora* flowers, Oct 1955, J. Armstrong (1 ♂, MVMA); 70 km W Cobar (–31.66°, 146.81°), 24 Nov 1949, E. F. Riek (1 ♀, ANIC); Murrumbogie (–33.02°, 147.42°), 16 Oct 1900, W. W. Froggatt (1 ♂, ANIC); Moree (–29.46°, 149.84°), 5 Dec 1917, W. W. Froggatt (ANIC); 1 ♀ Trangie (–32.03°, 147.98°), 5 Dec 1958, K. L. Taylor (1 ♂, 1 ♀, ANIC); near Bourke, 26 Oct 1949, S. J. Paramonov (1 ♂, USNM). QUEENSLAND. 16 km N Boonah (–27.90°, 152.68°), 6.i.1987 and 11 Apr 1998, C. J. Burwell (1 ♂, QMB; 1 ♀, ZSM); Lawes (–27.57°, 152.33°), 11 Feb 1945, W. Lovett (1 ♀, ANIC); Amby (–26.55°, 148.19°), H. E. & M. A. Evans & A. Hook (1 ♂, QMB); Mackay (–21.14°, 149.19°), R. E. Turner (1 ♀, BMNH).

Remarks. The species can be distinguished by the slightly infusate distal half of the forewing, the smooth and shining supraclypeal area that lacks a median longitudinal carina, and the deeply excised hypopygium.

Antargidium apicale (Kirby)

(Figs 13, 16, 17)

Hylotoma apicale Kirby, 1894: 45.

Antargidium apicale: Turner 1900: 517, 518 (collection record, habitat); Morice 1919: 254 (change of combination, classification, key to genera); Benson 1934: 229–230 (key to species); Benson 1963: 631 (classification); Taeger *et al.* 2010: 121 (catalogue).

Description. Female. Note. The following description is based on Benson (1934) and a damaged specimen of which only the hind part of the thorax, middle and hind legs, partial right forewing, hind wings, and abdomen including the saw (except its apex) were available for study.

Length about 5–6 mm. Abdomen orange with black apex. Pronotum black. Middle and hind legs brown. Wings slightly infusate; veins and stigma dark brown. Sawsheath rounded at apex with distinct dorsal projections (Benson 1934, Fig. 6a, b). Lancet with very shallow serrulae but distinct serration, proximal margins of annuli with short but distinct ctenidia.

Male. Length 5.0 mm. Upper parts of head black, gena, interantennal area and outer orbits yellow-brown. Thorax black. Legs black except forefemur at apex and foretibia yellow-brown. Abdomen orange-brown, first tergite suffused with brown and apex of abdomen from tergite four with black patch. Wings slightly infusate; veins and stigma dark brown.

POL slightly shorter than OOL (0.8); postocellar area about 2 × as broad as long. Eye about 1.3 × as long as broad, converging below, interocular distance 1.2 × eye height.

Host. *Alectryon oleifolius* (Desf.) S.T.Reynolds (Sapindaceae).

Distribution. Australia: Queensland.

Types. Syntype: Male, labelled “Type” [round label with red margin], “B. M. TYPE HYM. 1.108”, “apicale Kb. Type”, “B. M. TYPE HYM., *Hylotoma apicale* (Kirby 1894), 1.108”, “Mackay, Queensland, G. Turner, 1892–16”, “662” [glued on larger label], “R[...]lg 12.93” [glued on larger label] (BMNH, examined).

Additional specimens examined. Mackay, 1892, 12.[18]93, 1894, 1.[18]99, (5 ♂♂, BMNH, 1 ♂, USNM); Nanango Dist., H. Hacker, Nov. 1927 (1 ♀, QMB).

Remarks. Kirby’s (1894) original description includes both sexes and is based on three specimens, but it is not clear from the description how many specimens of each sex he had at hand. In his revision of the genus *Antargidium*, Benson (1934: 228) mentions the type specimens and apparently examined some or all of them, but he does not specify the number of specimens that he had at hand and their sex. For the current revision, only a single male labelled as type was available for study. This specimen agrees with the original description and bears a round label

with red margin and “Type” printed on it. The only female specimen of the species available for examination is a non-type. It is severely damaged and lacks a head, thorax (including forelegs), and left forewing, and is therefore insufficient for a redescription of the female gender of this species.

The position of m-cu (recurrent vein) and 2r-m (cubital vein) at the junction with M (medial vein) was used by Benson (1934) to separate *A. apicale* from *A. dentivalve*. However, Benson (1935) noted that this character exhibits intraspecific variation and is not suitable for separating the species.

***Antargidium atriceps* Benson**

(Figs 2, 9, 18, 19)

Antargidium atriceps Benson, 1935: 212–213.

Antargidium atriceps: Quinlan, 1974: 227 (type information); Benson 1963: 631 (classification); Taeger *et al.* 2010: 121 (catalogue).

Description. Female. Length 5–6 mm. Head black (except mouthparts brownish). Thorax black with pronotum and tegula yellow. Lower mesepisternum brownish. Legs yellow except tarsi suffused with brown. Abdomen with tergites 1–3 yellow and apical half black. Wings slightly infusate; veins and stigma dark brown to black.

Supraclypeal area with distinct longitudinal median carina. Antenna slightly longer than width of head (1.1); pedicel transverse, $0.7 \times$ as long as broad. POL slightly shorter than OOL (0.8); postocellar area about $1.8 \times$ as broad as long. Eyes about $1.5 \times$ as long as broad, converging below, interocular distance $1.2 \times$ eye height. Posterior margin of hypopygium entire. Sawsheath narrow and pointed in dorsal view, subtruncate in lateral view, dorsally at base with scopae but without dorsal projections. Lancet stout, rounded at apex, with 18 shallow serrulae, serration of serrulae indistinct, proximal margins of annuli with ctenidia.

Male. Length 4.5–5.5 mm. Similar to female except colour sometimes darker and some specimens almost completely black.

Host. *Arytera distylis* Radlk., *A. foveolata* F. Muell. (Sapindaceae).

Distribution. Australia: Queensland.

Types. Holotype: Female, labelled “Type” [round label with red margin], “T5931”, “Tambourine, 21-2-27, H Hacker”, “Genitalia mounted on a slide” [printed], “Holotype, *Antargidium atriceps*, ♀, det. R. B. Benson, 1934” (BMNH, examined). Paratypes: “Conondale, 7-1-30, H Hacker” (1 ♀, BMNH); “National Pk., Q[ueensland], H. Hacker, Nov. 1920” (1 ♀, QMB); same data as holotype (1 ♂, QMB).

Additional specimens examined. QUEENSLAND, Mt. Tambourine, 15.ii.1960, F. A. Perkins (1 ♀, QMB); Brookfield (27° 28' S, 152° 53' E), 10.i.1999 and 13.xii.1997, reared from larvae on *Arytera distylis*, J. Grigg (6 ♀, 4 ♂, QMB; 1 ♀, 1 ♂, ZSM); Enoggera Res., site 3 RF (27° 27' S, 152° 55' E), 21.xii.1999–27.i.2000, C. J. Burwell & S. G. Evans, Malaise, 100 m, 50265 (1 ♀, QMB); Lamington National Park, 27.vi.2007, larvae on Sapindaceae, D. Bito (5 ♀, 3 ♂, QMB); Brookfield, Rafting Ground Reserve, (27.47° S, 152.898° E, 67 m), 16.ix.2007, S. Schmidt (1 ♀, ZSM) (ZSM-HYM AE058); Brisbane, Rafting Ground Reserve, Pullen Vale, (27° 31' S, 152° 53' E), 6.xii.1998, reared from larvae on *Arytera foveolata*, J. Grigg (1 ♂, QMB).

Remarks. The type locality that is given in Benson’s original description as Tamborine, New South Wales, is probably incorrect. The locality written on the holotype label is Tambourine and this most probably refers to Tambourine in south-eastern Queensland (also written as Tamborine) and not in New South Wales. Also, all other specimens of the species, including all paratypes, were collected in south-eastern Queensland. The distribution is therefore given as Queensland. However, since the species is rarely collected, it is possible that it has a wider distribution and occurs in northern New South Wales or even further south.

The species can readily be distinguished from other members of the genus by the completely black head (except the mouthparts) and the pronounced median longitudinal carina on the face reaching from the frontal down to the supraclypeal area.

Antargidium dentivalve Benson

(Figs 4, 5, 10, 20, 21)

Antargidium dentivalvis [sic!] Benson, 1934: 231–232.

Antargidium rufum Benson, 1935: 213. **Syn. nov.**

Antargidium dentivalvis: Quinlan 1974: 227 (type information); Benson 1963: 631 (classification)

Antargidium dentivalve: Taeger *et al.* 2010: 121.

Description. Female. Length 4–5 mm. Head orange except antenna black and ocellar region marked with brown spot. Thorax brown (rarely completely dark brown to black) with anterior part orange-yellow, including pronotum, mesoscutellar midlobe, tegula and a stripe on the mesepisternum. Legs brown except knees, tibia, tarsi of foreleg, and hind trochanter yellow-brown. Abdomen yellow with basal tergite suffused with brown. Sometimes specimens extensively yellow so that brown colour reduced to the following parts: flagellum, outer tibia and tarsus of foreleg, tibiae and tarsi of mid and hind legs. Wings slightly infusate, veins and stigma dark brown.

Supraclypeal area with longitudinal median carina ending some distance from clypeus. Antenna slightly longer than width of head (1.1); pedicel transverse, $0.6 \times$ as long as broad. POL slightly shorter than OOL (0.8); postocellar area about $2.0 \times$ as broad as long. Eyes about $1.5 \times$ as long as broad, converging below, interocular distance $1.2 \times$ eye height. Posterior margin of hypopygium entire. Sawsheath suberect, strongly narrowed towards apex, dorsally with finger like projections (Benson 1934, fig. 5a, b). Lancet bluntly rounded at apex, with 17 serrulae, basal 3 serrulae rounded, other serrulae serrate, proximal margin of annuli with very short and indistinct ctenidia.

Male. Length 3.5–4.5 mm. Apart from sex related differences, similar to female in structure and colour.

Host. *Arytera divaricata* F. Muell., *A. foveolata* F. Muell. (Sapindaceae).

Distribution. Australia: New South Wales, Queensland.

Types. Holotype *A. dentivalve*: Female, labelled “Type” [round label with red margin], “B. M. TYPE HYM 1.109.”, “Holotype, *Antargidium dentivalvis* **sp. nov.**, ♀, det. R. B. Benson, 1934”, “Arge apicale (Kby), det. Roh[wer].”, “R. E. Turner, 1910-225” (BMNH, examined). Paratypes: Male, labelled “Allotype” [round label with yellow margin, “Para” crossed out and replaced with handwritten “Allo”], “Queensland, Townsville, 14-ii-03, F. P. Dodd”, “R. E. Turner, 1910-225”, “Allotype, *Antargidium dentivalvis* **sp. nov.**, ♂, det. R. B. Benson, 1934” (1 ♂, BMNH).

Holotype *A. rufum*: Female, labelled “Type” [round label with red margin], “Tooloom, N.S.W., Jan. 1920, H. Hacker”, “T 5934”, “Genitalia mounted on a slide”, “Holotype, *Antargidium rufum* **sp. nov.**, det. R. B. Benson, 1934” (QMB, examined).

Additional specimens examined. QUEENSLAND, Bowen, 20.ii.1930 (2 ♂♂, 6 ♀♀, QDPI); Brisbane, Rafting Ground Reserve, Pullen Vale, (27.516° S, 152.882° E), 6.xii.1998, reared from larvae on *Arytera foveolata*, J. Grigg (1 ♀, QMB); 16 km N Boonah (27.90° S, 152.68° E), 17.ix.1994 and 15.xii.1996, C. J. Burwell (1 ♂, 2 ♀♀, QMB; 1 ♀, ZSM); Mount Scoria, 6 km S Thangool (24.533° S, 150.600° E), 1.i.1991, G. and A. Daniels (1 ♀, QMB); Townsville, 14.xi.1903, F. P. Dodd (1 ♀, QMB); Cape York, 1868, Thorey (1 ♀, NHMW); Toogoom, 11.x.1979, H. E. & M. A. Evans, A. Hook (1 ♂, QMB); Boonah, 15.ii.1947, Mosser (1 ♂, QMB); Townsville, D. & H. Priestly (1 ♀, QMB); Imbil, 27.i.1928[?], Q. R. B. (1 ♂, QDPI); Brookfield (27.466°S, 152.883°E), 17.i.1999, ovipositing on *Arytera divaricata*, J. Grigg (3 ♀♀, QMB; 1 ♀, ZSM). NEW SOUTH WALES, Tooloom, Jan. 1920, H. Hacker (1 ♀, BMNH).

Remarks. The colour of *A. dentivalve* is variable. The colour of the thorax in particular ranges from almost completely yellow-brown to completely dark brown (to black). In the majority of specimens the thorax is brown with the anterior parts yellow. Some specimens are almost completely yellow-brown with only antenna, mandibles, and tibiae and tarsi brown, and were described by Benson as *A. rufum*. However, the extent of brown colour is highly variable and no morphological characters could be found that would support the notion that yellow specimens represent a distinct species. Benson had to rely on very few specimens for his descriptions which did not allow him to see the amount of colour variation that is present in the species.

Taeger *et al.* changed the specific epithet from *dentivalvis* to *dentivalve* in an attempt to meet the gender agreement required by Article 31.2 of the Code of Zoological Nomenclature (CZN 2001). However, there is no clear indication that Benson regarded the name as adjective and not as noun in apposition. On the contrary, there is evidence of usage that Benson regarded the epithet as a noun because he described other *Antargidium* species with correct gender ending (e.g. *A. allucente*, *A. apicale*).

Although Benson treated his name in the dative case which is not permitted (Article 11.9), the name *dentivalvis* should be regarded as an incorrect original spelling that is to be preserved (Article 32.5). Since the Code requires retaining a name if it can be regarded either as noun or as an adjective, the Code (Article 31.2.2) suggests retaining the original spelling. However, for the sake of stability, the name change by Taeger *et al.* is here accepted, combined with a plea for not changing names that have been in usage for over 70 years, even if they are regarded to be incorrect, and in particular if the intention of the author can be derived unambiguously from the original description.

***Antargidium flavescens* new species**

(Figs 3, 7)

Description. Female. Length 5.7 mm. Flagellum yellow with brown base, scape and pedicel brown. Head yellow, lower face whitish, brown are the ocellar area, supraantennal area, a line along lateral sides of postocellar area, and apex of mandibles. Thorax yellow, midlobe of mesoscutum anteriorly with indistinct brown patch, lateral lobes with a brown stripe; pectus with brown patches; metathorax dorsally with brown markings. Legs yellow. Abdomen yellow, basal tergites with very faint transverse brownish patches. Wings hyaline, costa of forewing whitish, stigma whitish with brown centre.

Supraclypeal area smooth and shining, with scattered punctation, without median longitudinal carina. Antenna shorter than width of head (0.8); pedicel transverse, $0.6 \times$ as long as broad. POL subequal to OOL; postocellar area about $1.7 \times$ as broad as long. Eyes about $1.7 \times$ as long as broad, very slightly converging below, interocular distance $1.2 \times$ eye height. Sheath narrow in dorsal view, evenly tapering toward apex, obliquely truncate in lateral view, without dorsal projection.

Male. Unknown.

Host. Unknown.

Distribution. Australia: Western Australia.

Type. Holotype: Female, labelled “Crossing Pool, Millstream, W.A., 22. oct. 1970, J. C. Cardale”, “Holotype, *Antargidium flavescens* sp. nov., ♀, det. S. Schmidt 2011” [red label] (ANIC).

Etymology. The species is named after the predominantly yellow colour.

Remarks. The species is only known from the female holotype. It is, unlike the other *Antargidium* species, almost completely yellow. The colour pattern is similar to pale specimens of *Antargidium dentivalve* (described by Benson as *A. rufum*), but the latter has brown legs and (like all other *Antargidium* species) brown antenna, whereas in *A. flavescens* the flagellum is mostly yellow and the legs are completely yellow. Furthermore, the sawsheath lacks dorsal projections that are present in *A. dentivalve*. The saw was not dissected to prevent damaging the only known specimen of the species and because the species can be readily distinguished from other species of the genus by the characters given in the key.

***Antargidium nigrum* new species**

(Figs 5, 15, 16)

Description. Female. Length 6–7 mm. Head and thorax black, abdomen dark brown to black, tegula, tibiae of fore- and middle leg, and hind tibia at base whitish, tarsi brown. Wings hyaline, veins and stigma dark brown.

Supraclypeal area without median longitudinal carina, sparsely but distinctly punctured and, as the whole head, with pale grey setation contrasting to black colour of head. Antenna shorter than width of head (0.9); pedicel transverse, $0.4 \times$ as long as broad. POL slightly shorter than OOL (0.9); postocellar area about $2.0 \times$ as broad as long. Eyes about $1.5 \times$ as long as broad, converging below, interocular distance $0.8 \times$ eye height. Sheath narrow, almost parallel sided in dorsal view, without dorsal projections, in lateral view obliquely truncate. Lancet narrow and pointed at apex, with 20 serrulae, basal 2 serrulae rounded, other serrulae distinctly serrate, proximal margin of annuli with distinct, but slender and almost seta-like ctenidia.

Male. Apart from sex related differences, similar to female in structure and colour.

Host. *Labichea lanceolata* Benth. (Leguminosae).

Distribution. Western Australia.

Types. Holotype: Female, labelled “Tent. 7, H. 4 Dec. [19]71, N. McFarland Larval Collection – see notes”, “Holotype, *Antargidium nigrum* sp. nov., det. S. Schmidt 2011” [red label]. Paratypes: WESTERN AUSTRALIA. Red bluff Caravan Park, 2 miles south of Kalbarri, 2 ♀♀, 17.xi.1971, reared from larvae on *Labichea lanceolata*, and 1 ♀, 15.xi.1971, collected as adult on *L. lanceolata* (ANIC, ZSM); Bushmead, 1847 (1 ♂, WAM, Reg. Nr. 71285).

Etymology. The species is named after the predominantly black colour.

Biology. The specimens collected by Noel McFarland are associated with handwritten notes and include descriptions of larvae, cocoons and life history traits. Larvae feed on leaves of *Labichea lanceolata* Benth. The leaf margins and midrib usually remain untouched. They cling tightly and do not let go or drop unless pulled off. Usually there is only one per leaf. The cocoon consists of several layers of coarse, pure white, woolly-looking silk. Half and full grown larvae were collected in mid-November and by late November, and early December adults were hatching.

Acknowledgements

The following curators are thanked for the loan of specimens and access to their collections: Christopher Burwell and Susan Wright, QMB, Brisbane, Australia; Conrad P. Gillett, BMNH, London, UK; Terry F. Houston, WAM, Perth, Australia; John LaSalle and Nicole Fisher, ANIC, Canberra, Australia; David R. Smith, USNM, Washington, DC, USA; Ken Walker, MVMA, Melbourne, Australia; Shaun Winterton, QDPI, Brisbane, Australia.

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